

CLAIMS

What is claimed is:

1. A bearing compartment comprising:
a housing comprising a duct;
a scavenge scoop within said housing, said scavenge scoop in communication with a first portion of said duct; and
a settling area within said housing adjacent said scavenge scoop, said settling area in communication with a second portion of said duct
2. The bearing compartment as recited in claim 1, further comprising a partition located at least partially within said duct.
3. The bearing compartment as recited in claim 2, wherein said scavenge scoop forms said partition.
4. The bearing compartment as recited in claim 2, wherein said partition bifurcates said duct.
5. The bearing compartment as recited in claim 1, wherein said settling area is downstream of said scavenge scoop relative to a rotational direction defined about an axis of rotation.
6. The bearing compartment as recited in claim 1, wherein said duct is generally parallel to said axis of rotation.
7. The bearing compartment as recited in claim 1, wherein said duct communicates with an oil sump.

8. The bearing compartment as recited in claim 1, further comprising a shield at least partially covering said settling area.

9. The bearing compartment as recited in claim 1, further comprising a shield at least partially covering said settling area, said shield comprising a plurality of apertures therethrough.

10. An oil scavenge system for a gas turbine engine comprising:
a housing defined about an axis of rotation, said housing comprising a duct;
a scavenge scoop within said housing, said scavenge scoop in communication with a first portion of said duct, said scavenge scoop comprising a partition which forms said first portion of said duct;
a settling area within said housing adjacent said scavenge scoop, said settling area in communication with a second portion of said duct opposite said partition; and
a shield at least partially covering said settling area.
11. The oil scavenge system as recited in claim 10, wherein said housing is located within a mid bearing compartment of a gas turbine engine.
12. The oil scavenge system as recited in claim 10, wherein said settling area is downstream of said scavenge scoop relative to a rotational direction defined about said axis of rotation.
13. The oil scavenge system as recited in claim 10, wherein said duct is generally parallel to said axis of rotation.
14. The oil scavenge system as recited in claim 10, wherein said duct is located at bottom dead center of said housing.
15. The oil scavenge system as recited in claim 10, wherein said axis of rotation comprises a centerline of said gas turbine engine.

16. A method of scavenging oil within a gas turbine engine comprising the steps of:

- (1) collecting an air-oil mixture within a scavenge scoop;
- (2) communicating the air-oil mixture from the scavenge scoop to a first portion of a duct;
- (3) collecting settled air-oil mixture in a settling area adjacent the scavenge scoop the settling area downstream of the scavenge scoop relative to a rotational direction defined about an engine centerline; and
- (4) communicating the air-oil mixture from the settling area to a second portion of the duct.

17. A method as recited in claim 16, further comprising the step of: shielding the settling area from interfacial shear.

18. A method as recited in claim 16, further comprising the step of: providing flow apertures to the settling area.